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AUTHOR Williams, David; Loertscher, Kyleen
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ABSTRACT

A case study of a teacher as a naturalistic inquirer is presented. A class in naturalistic inquiry methods was offered to practicing teachers and other graduate students during a 15-week semester. During the first two or three weeks, students read extensively about qualitative methods and identified a possible site to conduct a study. The remainder of the course included conducting the studies, discussing the experiences in weekly class meetings and writing a final report. The teacher/researcher observed one student's work/study habits and interactions with teacher/researcher and peers daily for over three months. A videotape camera recorded the student's behavior during ten hours of classroom activities. Field notes were made based on the tapes and recalled details. Repeated interviews, formal and informal, were conducted with the student, his peers, principal, parents and school guidance counselor. The teacher/researcher maintained a detailed set of field notes, a log of observations, a record of interview results and teacher attitudes, and evolving analyses of the data. Two questionnaires provided sociograms and information on the student's life, family and attitudes. The paper then describes the study process, identifies difficulties and benefits encountered, summarizes activities taking place since the study, and suggests implications for other teachers and settings. (PN)

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Teachers as Naturalistic Inquirers-

a case study

David Williams, Brigham Young University

Kyleen Loertscher, Jordan School District

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The point has been made repeatedly that educational research and evaluation findings are seldom used by practicing educators (Bell, 1975; Borg and Gall, 1983; Goodlad, 1984; Osguthorpe and Johnson, 1981). One of many reasons posited for this phenomenon is that practitioners are not involved in identifying research and evaluation issues, gathering data or interpreting results; so they see little value in the information provided by others.

Osguthorpe and Bishop (1978) suggest that through creative orchestration of practitioners' and researchers' efforts, research can be made more relevant to teachers and administrators and they will be more likely to use the findings to improve practice. Goodlad (1984) sounds the same theme in his discussion of key schools. Shapiro (1983) outlines a model for improving data based teacher decision making by training teachers to create and administer simple instruments and statistical analysis procedures as classroom evaluators in their own classrooms. However, most suggestions for involvement of practitioners assume that they should leave actual research and evaluation activities to researchers from universities or other agencies.

Anthropologists, responsive evaluators, and others who advocate the use of naturalistic or qualitative forms of inquiry (Bogdan and Biklen, 1982; Spindler, 1963; Yoder, 1981) have suggested that teachers are ideally situated to study their own settings naturalistically; therefore, they should be encouraged to participate directly in the research and/or evaluation processes.

For example, in a brief article to composition teachers, Hoagland (1984) made the following claim: "How do you feel about research in the field of composition? Does the research you read make you feel passive? Disinterested? Are you ever the unwilling receiver of another's findings? I invite you to join a growing number of teachers who are becoming active

researchers. Every writing class, including yours, offers research opportunities - why waste them? The methodology that taps these chances is qualitative research, ... Researchers in composition now recognize that much of the needed research can be done best by the person most familiar with the context of school-sponsored writing -- the classroom teacher. These case studies serve two purposes: first, they are learning experiences for the teacher-researchers, and second, as they are published, they become a storehouse of knowledge about the teaching of writing from the perspective of the classroom teacher." (pg. 55)

If teachers could gather information themselves, they might value that data and be motivated to use the results to improve their practices. Also, the results they could obtain (if done well) would be extremely valuable to educational researchers who want to discover how educational variables interact in natural settings. Hence, evaluative and research objectives could be met if teachers could conduct naturalistic studies while they teach.

Yet, even the advocates of qualitative or naturalistic approaches caution that it could be extremely difficult for a teacher to simultaneously teach and gather feedback as a participant observer. As Bogdan and Biklen (1982) suggest, most teachers usually conduct many of the inquiry activities naturalistic evaluators and researchers employ but less rigorously and for different reasons:

"Many intelligent laypeople are astute observers of their world, do systematic inquiries, and come to conclusions. Good teachers do this consistently. What they do is like qualitative [naturalistic] research, but it is different in a number of ways. First, the observer's primary duty is to the research; he or she does not have to devote time to developing curriculum, teaching lessons, and disciplining students. The researcher can thus devote

full time and energy to taking it all in. Also, researchers are rigorous about keeping detailed records of what they find. They keep data. Teachers keep records too, but these are much less extensive and of a different sort. Further, researchers do not have as much of a personal stake in having the observations come out one way or the other. The teacher's life, career, and self-concept are always intimately tied to seeing what he or she is doing in a particular way. This is not to say that teachers cannot transcend this to do research or that researchers do not also have a stake in their studies. But for the researchers, success is defined by doing what certain others define as good research, not seeing what the teacher does in any particular way. Another way that the researcher and the teacher differ is that the researcher has been trained in the use of a set of procedures and techniques developed over the years to collect and analyze data. Last, the researcher is well-grounded in theory and research findings. These provide a framework and clues to direct the study and place what is generated in a context." (pg. 40)

This list of differences could be discouraging to those who hypothesize that teachers must participate in the inquiry process if research and evaluation efforts are to be truly fruitful and if the lessons learned from such investigations are to be put into educational practice. A useful first test of this hypothesis would be to see if teachers could be taught to use naturalistic assumptions, procedures and techniques while teaching and to assess the usefulness of the results to them and to the research community in light of the difficulty and costs involved in doing the study.

To explore these assumptions empirically, the senior author offered a class in naturalistic inquiry methods to practicing teachers and other graduate students during a 15 week semester. During the first 2-3 weeks, students read

extensively about qualitative methods and identified a site in which they could conduct a study. Then, the rest of the course was spent doing the studies, discussing the experience in weekly class meetings and writing a final report. Although others participated, this summary describes the experiences of one of those students who was teaching third grade during that same semester.

Methods

The research methods were essentially naturalistic. The teacher/researcher observed one student's (Jimmy) work/study habits and interactions with the teacher/researcher and peers daily for over three months. Observations took place in the classroom, the cafeteria and on the playground. The teacher/researcher also set up a videotaping camera with which she unobtrusively recorded the student's behavior during about ten hours of classroom activities. After school hours, she observed these tapes, taking field notes, analyzing and amplifying the observations with details she recalled as a participant observer in the same classroom. She also conducted repeated interviews, formal and informal, with the student, his peers, principal, parents and school guidance counselor. She maintained a detailed set of field notes, logging her observations, interview results, feelings as the teacher and evolving analyses of the data.

In addition to these qualitative procedures, she further triangulated the findings by developing and administering two questionnaires. One identified who the students in the class chose as their friends. It was given to the entire third grade class to help her discover who, if anyone, would select the observed student as their friend. The results were used to construct two sociograms which confirmed conclusions she had reached based on data gathered earlier through many observations of the student. The second questionnaire provided

important background information on the student's life, family and attitudes. It was administered to the entire class, too, to avoid drawing special attention to Jimmy.

To facilitate analysis, the teacher/researcher maintained a detailed log of her data collection activities and decisions. She and the senior author reviewed her activities throughout the collection and analysis phases and again after the study was completed. In the following sections, we describe the process the teacher/researcher used to do the study, identify difficulties and benefits she encountered, summarize what she has done as a teacher/researcher since completing the study and suggest implications for other teachers and settings.

The Process

Beginning purposes. At the time of the study the teacher/researcher was enrolled in a graduate course on naturalistic inquiry methods. Therefore, her major purpose was to explore the possibilities of using naturalistic methods to obtain rich feedback on her performance as a teacher and the needs of all her students. Related objectives of the study were:

1. to better understand a student's attitudes and behavior, and
2. to discover ways to help a student improve his work, study and social skills.

Selecting a student. The school was an open school using a team teaching philosophy in which the students were grouped according to abilities and needs in reading and math. Jimmy was assigned to the teacher/researcher's classroom throughout the day. He was chosen to participate in this study because he had demonstrated signs of having difficulties in school and because of easy accessibility. He was assigned to the teacher/researcher's classroom throughout the day.

Through her casual "pre-study" observations, the teacher/researcher judged Jimmy to be "bright." But, she also found he had poor work/study skills (he rarely finished his daily assignments and spent inordinate amounts of time keeping to himself, staring at nothing in particular and playing with little bits of paper, erasers, etc.). More seriously, Jimmy was becoming more and more disruptive to the other children. She often noticed him bouncing in his chair, humming or making strange slurping and beeping noises with his mouth. In an interview with Jimmy, the teacher/researcher asked what he least liked about school. His response showed how distractable he was: "When people disturb me when I'm busy. When people just start talking out and I just can't work."

He also had poor social skills. He had few friends and even those he played with were usually unkind to him. In response to the teacher/researcher's questions about who he liked to play with, he gave two boys' names but then said, "I sometimes play with them cause I don't have anyone to play with. . . .I don't like playing with them too much . . . cause they're bothering me. They're just teasing me . . . . Sometimes when I come by they just run. I just don't want them to run away from me if they are playing with me. . . ."

His problem had been diagnosed the previous year by the school guidance counselor as a slight attention deficit. But he had not been tested any further and no action had been taken to solve his problem. Given these preliminary observations, the teacher/researcher hoped to discover ways to help Jimmy improve his work/study and social skills by observing him closely, analyzing the descriptions obtained and then designing and implementing plans for improving his skills.

Data collection. The first attempts at gathering data proved to be ineffective. The teacher/researcher tried to take fieldnotes on Jimmy's activities

while the students were doing seat work. However, the students demanded her time and attention even then and she could not concentrate on taking fieldnotes. She then discovered the school had a video camera that was rarely in use. So videotape became a major resource for gathering observations on which she could take fieldnotes. The video equipment disrupted the class at first, but within a few days the students seemed to forget it was there. Even though she spent many hours before and after school viewing the tapes, the teacher/researcher found this was an excellent method of observation. She could replay the tapes several times for more detailed and accurate fieldnote expansion.

In addition to depending heavily on the videotapes to capture dialogue, facial expressions, student interactions, and so on, the teacher/researcher capitalized on the fact that she had been in the room too, while the tape was shot, by including her perceptions, feelings and thoughts in her fieldnotes while she reviewed the videotapes. Likewise, she used the more traditional fieldnote taking processes she was learning at the university on the playground, in the cafeteria and in the music room where the video equipment could not be used.

In spite of the many advantages associated with the videotape process, the teacher/researcher began to suspect that her fieldnotes were developing a detached quality because she was removed from the observed situations while viewing the tapes. She worried that her objective to discover and understand Jimmy's attitudes and behavior could not be accomplished completely by observing him on a screen. So, she decided to triangulate with interviews.

On several different occasions, the teacher/researcher interviewed Jimmy regarding his feelings about school, school work, his own abilities in school, peers, parents, siblings, and his likes and dislikes outside of school. Some of

his peers were interviewed, too, so Jimmy would not feel singled out. These interviews were conducted informally on the playground and in private in class as well as formally (students were invited to the teacher/researcher's desk for brief conferences). The teacher/researcher took notes during most of these interviews (or shortly after the interview ended) and tape-recorded some of them, as well.

In one instance, the teacher/researcher wanted to obtain the student's description of what happens to him on a typical day at school. However, because he spent his entire day in her classroom, she worried that she would guide or otherwise influence his responses. So the principal, who had taken a keen interest in this study being conducted by one of his junior faculty, willingly conducted the interview with Jimmy.

As the study progressed, the teacher/researcher began to wonder what additional insights the parents could provide from their perspective. She also worried that they might be upset that she was focusing so much attention on their son. After much deliberation regarding the best way to proceed, she decided to turn a scheduled parent/teacher conference into an interview. She invited the parents to interview her about their child, which made it natural for her to interview them about Jimmy at home and historically. The interview was taped with the parents' permission for later reference. The parents responded so positively to this approach (they found it very professional and creative) that all the other parent/teacher conferences were conducted the same way -- as interviews.

The school guidance counselor was interviewed, also. Though the teacher/researcher was not given direct access to Jimmy's files, the guidance counselor did review the testing done by herself the previous year and by

another counselor three years earlier. This interview was also tape recorded for further reference.

Other teachers were informally interviewed and their experiences with and opinions of Jimmy were solicited. Several of these teachers later reported that through their exposure to the study done by the teacher/researcher, their understanding of Jimmy increased.

In addition to these qualitative procedures, the teacher/researcher further triangulated the data sources and findings by developing and administering two questionnaires. The first was used to construct two sociograms. The questions were designed to reveal who, if anyone, would choose Jimmy as a friend. The results of the sociograms amplified the teacher/researcher's concerns about the student's lack of friends and social skills. It was found that many students thought Jimmy was nice, but still didn't choose him as a friend or someone they would play with.

The second questionnaire elicited background information from the children about their family and home life, feelings and attitudes. This questionnaire was also administered to the whole class to minimize noticeable special attention on Jimmy.

Data analysis and reporting. Analysis began almost as soon as data collection. As she viewed the video-tapes and reflected on her experiences with Jimmy, the teacher/researcher discovered patterns in his behavior. These initial insights were written into her fieldnotes and became part of her data base. Likewise, as she wrote down Jimmy's responses to her interview questions, the parents' and counselor's ideas and her thoughts on observed interactions between Jimmy and his classmates, she began to develop a clearer understanding of this student's world, his feelings, his fears, and so on.

After watching each video taped session and taking fieldnotes on them, the teacher/researcher then expanded her notes and wrote comments in the margins regarding additional insights and connections between parts of the growing data record. These notes helped her begin the analysis of the data while she was still collecting it and aided her in making decisions about how and when to access other data sources.

As part of the university course assignment and to help her clarify the insights she was gaining, the teacher/researcher tried some of the qualitative data analysis procedures discussed by Miles and Huberman (1984) such as pattern coding, memoing and context charting. Through a series of such analyses extending throughout the three month study of Jimmy, she reached several conclusions about his challenges and what she could do to help him. She included a summary of these insights along with extensive descriptions of Jimmy's school experience in a final report for the course. She also provided an "audit trail" (see Guba, 1981 for a discussion of audit trails) documenting the methodological decisions she made throughout the study.

Results and Conclusions

The major finding was that the teacher/researcher was able to accomplish her objectives in spite of several difficulties she encountered. As a result, she not only learned valuable information about herself and the student (and tangentially about other students); she also learned to value research and evaluative feedback more highly. There were several difficulties as well as benefits associated with this experience.

Difficulties. The teacher/researcher did encounter some problems in conducting the inquiry. She began the study trying to take fieldnotes while the children were busy with seat work. She soon found that the children demanded

her time and attention even then. Luckily, her building had a video camera that was not being used too heavily by others. Videotaping was disruptive to the class at first; but the children soon ignored the machine. The equipment was set up close to Jimmy's desk which enabled the teacher/researcher to view him almost constantly. However, each time he left his desk, he also left the camera's view.

Even then, having to stay after school many nights to review and analyze those tapes and to create and expand her fieldnotes based on the tapes and on her memory of the day was a grueling ordeal. It was also difficult to have to write all the results and conclusions from the study into a final report; however, we suspect that final step will not be essential in the future as she continues to conduct this type of inquiry on other students for her own evaluative and diagnostic feedback.

When she first contemplated interviewing the parents of the child she was studying, she worried they would be upset that she was focusing too much attention on him and that she may find problems they wouldn't want to deal with. When she finally decided to interview all the parents (more work than anticipated), she was surprised to discover that the parents appreciated the attention she gave to their views and to their child.

Although this teacher had been fairly observant of her students before the study, she had to admit she probably neglected some children in order to focus extra attention on this one boy. However, the experience was so positive she has continued focusing attention on other individual students in a series of mini-studies.

A surprising outcome was that the teacher/researcher became frustrated when she discovered many of the problems the boy had had not been

addressed yet by the school. She worried that perhaps she had negatively influenced him by not realizing his special needs earlier. A little information made her realize how much more there might be to learn.

Benefits. Although there were some difficulties to work out, the results of the study were essentially positive. The most obviously positive outcome for the teacher/researcher was a change in her attitude and feelings toward Jimmy. Through the several hours of observation and interviews, she better understood the reasons for his inappropriate behaviors and her concern and genuine interest in him as an individual increased. Other teachers and students had difficulty accepting Jimmy and not being annoyed by his disruptive and sometimes strange behaviors. The teacher/researcher found herself defending him against cruel comments from others who did not understand him and his needs as she felt she did. Even though she focused more attention on Jimmy than on the other students, the teacher/researcher was surprised to discover that the other students did not seem to notice, while the effect of her focused attention on Jimmy was very positive.

With this change in attitude, the teacher/researcher identified several ways to help Jimmy improve. She began by giving him extra positive reinforcement when he stayed on task and by finding opportunities for him to discuss topics of interest to him in class. Through the interviews with Jimmy, his parents, and the guidance counselor, she found other needs she felt she and other school personnel could address. His disruptive and inappropriate behaviors could be curtailed through guidance counseling as well as the positive reinforcements of other teachers for appropriate behaviors. Also the guidance counseling would help him improve his social skills through positive contact with his peers in a "friendship group" under the direction of the guidance counselor. In the

classroom, the teacher could draw on his knowledge and experiences in front of his peers, to help them gain an appreciation for him.

Another positive effect of the study was improved relations with the parents. Although she had worried that the parents would not understand her intent in studying their son in depth, by referring to the parent/teacher conference as an interview, the teacher/researcher found the parents opened up and gave her valuable information which helped her identify other ways to help Jimmy. Also because of the hours of observation she had done, she was prepared to share useful information with the parents.

Not only did she gather useful data about the student she was observing, but also about herself and her own teaching techniques. This experience helped her realize how few one-on-one interactions she was having with children in a typical day in the classroom. Her fieldnotes helped her tally the positive and negative reinforcements she was giving. She discovered that she gave more positive reinforcers than negative ones to the group as a whole, but the negative outnumbered the positive for individuals. These findings led to a renewed effort to practice the principles of reinforcement she had always intended.

There were several side benefits from the study aside from the insights the teacher/researcher gained regarding the student. For example, the principal took an active interest in her project and interviewed the student for her to see what additional information Jimmy would reveal to a different adult. As a result, the teacher-principal relationship was improved (as was the principal's opinion of the teacher). Also, as she reviewed the videotapes for data on the student, she saw herself as the teacher and was able to note strategies she was using that worked well and areas in which she could improve. Although the focus was

not on self evaluation, such information flowed naturally and usefully to her as she learned to be a better observer.

Since the study. As a result of this study, the teacher/researcher has made some permanent changes. She learned by experience that a teacher is one of the most natural people to be a participant /observer in a classroom since he/she has constant access to the classroom and students. Unlike an outside researcher, who must take time and care to develop rapport with new informants every time they enter a new classroom, the teacher is not a stranger to the setting. They have ongoing opportunities to develop strong and fruitful informant relationships.

Though her first experience with naturalistic inquiry methods in the classroom took three months and many hours of work and only directly benefitted one student, she discovered how these techniques could also be used realistically to benefit all of her students. Although the teacher/researcher has not found it feasible to conduct formal, detailed studies on each of her students like she did with Jimmy, she has begun to conduct periodic mini-studies, focusing on one child at a time. She continues to use the video taping equipment. Taping all the students in the classroom enables her to view the tape several times, each time focusing on a different student. Even though each student is not necessarily observed, all are benefitting from her efforts. The teacher/researcher has continued discovering needs of the students with the most severe problems through analysis of these tapes. She hopes all the students will benefit from her associated efforts to improve the learning environment.

She continues to accumulate fieldnotes and finds they are useful for later reference. The teacher/researcher takes fieldnotes as she reviews the video

tapes and when the equipment is not available, she takes observation notes throughout the day and expands them into workable fieldnotes after school.

In addition to observation, the teacher/researcher continues to interview students and parents and administer questionnaires to discover feelings and attitudes her students have about themselves and the school. Not only does this help her gather useful information,the teacher/ researcher finds that her interviews with students help her convey a genuine love and concern for them to which they are extremely receptive. Public relations are improved immensely when parents are interviewed because they also sense the teacher's interest in their child as an individual.

So far, the fieldnotes from these mini-studies have not been analyzed to be written up as formal reports. Rather, the teacher/researcher reviews and analyzes them to obtain formative evaluation feedback and then maintains them as reference files on the students observed for herself and others who may want to collaborate with her to conduct related research.

She continues to construct sociograms and use them to identify students who are well-liked and those who are loners. Sociograms before, during and after mini-studies reveal useful information about children's social patterns, how they interact with one another and how those patterns change through the school year. They help identify students who are isolates and could benefit most from teacher recognition of their social needs.

Educational Importance

It is well known that naturalistic methods lend themselves to the study of education. The experience reported here suggests that as insider participants, teachers can learn to use naturalistic approaches to gather information about their students and about their own effectiveness. When they help produce such

information, they are more likely to value it and related research than when they only consume reports by others.

The teacher/researcher involved in this study discovered that even though the use of these methods is a lot of work and extra effort, it is an effective method to discover the needs of students, how to help them, and ways to improve the teacher's own teaching skills. She was converted to the value of gathering evaluative information in natural ways from her existing position of insight as a teacher. She found that inspite of the hard work involved, the skills needed to gather defensible, useful data were within her capacity, while she continued to teach.

Good teachers probably do naturally most of what the naturalistic teacher/ researcher does; but it is likely that most teachers will gather shallow information at best unless they learn to observe and interview perceptively and skillfully. Helping teachers gather useful and credible information about their students and their instruction could be a critical step, not only in making research more useful for teachers but also in improving education.

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